

CLAIMS LISTING

1. (currently amended) A binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer on an exposure side(1) on a support (2), characterized in that said support includes a layer of amorphous carbon (23) opposite to said exposure side.
2. (original) A binderless phosphor panel or screen according to claim 1, wherein said support further includes a polymeric auxiliary layer (24) ~~further away from said phosphor layer than said layer of amorphous carbon.~~
3. (original) A binderless phosphor panel or screen according to claim 1, wherein said support further includes a reflective auxiliary layer (22).
4. (original) A binderless phosphor panel or screen according to claim 2, wherein said support further includes a reflective auxiliary layer (22).
5. (original) A binderless phosphor panel or screen according to claim 3, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .
6. (original) A binderless phosphor panel or screen according to claim 4, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2 μm and 200 μm .7.

7. (original) A binderless phosphor panel or screen according to claim 3, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

8. (original) A binderless phosphor panel or screen according to claim 4, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

9. (original) A binderless phosphor panel or screen according to claim 5, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

10. (original) A binderless phosphor panel or screen according to claim 6, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

11. (original) A binderless phosphor panel or screen according to claim 7, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

12. (original) A binderless phosphor panel or screen according to claim 8, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from

the group consisting of parylene C, parylene D and parylene HT.

13. (original) A binderless phosphor panel or screen according to claim 9, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

14. (original) A binderless phosphor panel or screen according to claim 10, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

15. (original) A binderless phosphor panel or screen according to claim 1, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

16. (original) A binderless phosphor panel or screen according to claim 2, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

17. (original) A binderless phosphor panel or screen according to claim 3, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

18.(original) A binderless phosphor panel or screen according to claim 4, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

19.(original) A binderless phosphor panel or screen according to claim 5, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

20.(original) A binderless phosphor panel or screen according to claim 6, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

21.(original) A binderless phosphor panel or screen according to claim 7, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

22.(original) A binderless phosphor panel or screen according to claim 8, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

23.(original) A binderless phosphor panel or screen according to claim 9, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

24.(original) A binderless phosphor panel or screen according to claim 10, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

25.(original) A binderless phosphor panel or screen according to claim 11, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

26.(original) A binderless phosphor panel or screen according to claim 12, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

27.(original) A binderless phosphor panel or screen according to claim 13, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

28.(original) A binderless phosphor panel or screen according to claim 14, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

29.(currently amended) A method for producing a binderless storage phosphor panel comprising the steps of :
- providing an amorphous carbon film,
- vacuum depositing a storage phosphor layer on said

amorphous carbon film and, optionally,

- laminating a polymeric film on the side of the amorphous carbon film not covered by said phosphor.

30. (original) A method according to claim 29, wherein before said step of vacuum depositing a storage phosphor layer on said amorphous carbon film a step of applying a specularly reflecting layer on said amorphous carbon film is included.

31. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 1.

32. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 2.

33. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 3.

34. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and

capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
4.

35. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
5.

36. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
6.

37. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
7.

38. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
8.

39. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on Use in mammography of a screen or panel according to claim 9.

40. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on Use in mammography of a screen or panel according to claim 10.

41. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on Use in mammography of a screen or panel according to claim 11.

42. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on Use in mammography of a screen or panel according to claim 12.

43. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on

~~Use in mammography of~~ a screen or panel according to claim 13.

44. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 14.

45. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 15.

46. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 16.

47. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim 17.

48. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and

capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
21.

49. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
23.

50. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
25.

51. (currently amended) A method of obtaining a mammographic
image comprising exposing an object to x-radiation and
capturing said x-radiation passing through said object on
~~Use in mammography of~~ a screen or panel according to claim
27.

52. (new) A method for exposing an object to X-rays comprising
the steps of :
- providing an X-ray machine including an X-ray tube
equipped for emitting X-rays with an energy lower than or
equal to 70 keV and a phototimer coupled to said X-ray tube
for switching said tube on and off in accordance with an X-

ray dose in the range from 0.75 up to 0.85 mR reaching said phototimer,

- placing an object between said X-ray tube and said phototimer,

- placing a cassette with a binderless storage phosphor panel or screen between said object and said phototimer and

- activating said X-ray tube for exposing said object, said cassette and said phototimer until said phototimer switches said X-ray tube off, wherein said binderless storage phosphor panel comprises a vacuum deposited phosphor layer

(1) on a support (2), and wherein said support includes a layer of amorphous carbon (23) having a thickness between 500 μm and 2000 μm .

53. (new) Method according to claim 52, wherein said support further includes a reflective auxiliary aluminum layer (22) with a thickness between 0.2 μm and 200 μm .

54. (new) Method according to claim 52, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

55. (new) Method according to claim 53, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

56. (new) Method according to claim 54, wherein said protective auxiliary layer (21) is a layer of parylene wherein said

parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

57. (new) Method according to claim 55, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

58. (new) Method according to claim 52, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

59. (new) Method according to claim 53, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

60. (new) Method according to claim 54, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

61. (new) Method according to claim 55, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

62. (new) Method according to claim 56, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X

represents a halide selected from the group consisting of Br and Cl.

63. (new) Method according to claim 57, wherein said phosphor layer comprises a needle shaped CsX:Eu phosphor, wherein X represents a halide selected from the group consisting of Br and Cl.

64. (new) Method according to claim 52, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

65. (new) Method according to claim 53, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

66. (new) Method according to claim 54, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

67. (new) Method according to claim 55, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

68. (new) Method according to claim 56, wherein said support further includes a polymeric auxiliary layer (24) farther

away from said phosphor layer than said layer of amorphous carbon.

69. (new) Method according to claim 57, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

70. (new) Method according to claim 58, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

71. (new) Method according to claim 59, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

72. (new) Method according to claim 60, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

73. (new) Method according to claim 61, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

74. (new) Method according to claim 62, wherein said support further includes a polymeric auxiliary layer (24) farther

away from said phosphor layer than said layer of amorphous carbon.

75. (new) Method according to claim 63, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

76. (new) Method according to claim 52, wherein said method is a mammographic application method.